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by more than a hundred million persons. It is proposed to establish a Hispano-American Hospital, to arrange scientific tours and to make summaries of all medical papers written in Spanish available for members. The objects of the Umfia are to make its members known to each other, to establish relations, social and scientific, with the doctors of every country where Spanish is spoken; to establish an information bureau for Spanish or Portuguese doctors who go to Paris to pursue clinical work and research; to arrange courses of instruction, lectures, meetings, festivities and congresses, and to organize means of assistance to foreigners of Spanish-American origin settled in Paris who may be in need of help.

WE learn from *Nature* that the famous prehistoric camp, known as Maiden Castle, near Dorchester, has been, at the suggestion of King George, purchased by the Duchy of Cornwall, and will now be carefully preserved. The camp dates from Celtic times, and formed a shelter for cattle during tribal raids rather than a military fortress. Water was supplied from a neolithic dew-pond on the summit of the plateau, and the palisading kept at bay wolves and other enemies, while the cattle were left in charge of a few women and children. The cunningly arranged entrances to the camp supply a remarkable example of primitive methods of defence.

#### UNIVERSITY AND EDUCATIONAL NEWS

THE special state appropriation bills for the University of California, as signed by the governor, provide amounts as follows: support and maintenance of the university, \$400,000; agriculture (support and maintenance of all branches), \$700,000; New North Hall, \$400,000; impairment of income, \$62,000; replacement of buildings and equipment at Lick Observatory, \$50,000; university extension, \$50,000; Los Angeles medical department (support), \$20,000; Los Angeles medical department (new buildings), \$25,000; Scripps Institution for Biological Research, \$15,000;

printing, \$12,000; one dormitory at Davis, \$40,000; dining hall at Davis, \$10,000; classroom and library buildings at Davis, \$65,000; small buildings at Davis, \$20,000; 200 acres for experiment station in southern California, \$60,000; laboratory building for experiment station in southern California, \$100,000; residence, barns, etc., for experiment station in southern California, \$25,000; total special appropriations, \$2,054,000. To these appropriations there must be added the state university fund to be automatically appropriated during the coming two years for the support and maintenance of the university amounting in total to \$1,802,978. The grand total appropriated by the state of California for the University of California for the next biennium is therefore \$3,856,978.

YALE UNIVERSITY will receive \$475,000 from the estate of Dr. Francis Bacon, who died last year. The sum will be available for almost immediate use.

MRS. MARY EMERY has contributed \$125,000 to the Ohio-Miami Medical College of the University of Cincinnati for the endowment of a chair of pathology. A sum of about \$80,000 from the estate of Dr. Francis Brunning has also been received by the university, the income of which will be used for the endowment of a second chair.

THE general faculty of Oberlin College has voted to recommend to the trustees that this year all honorary degrees be omitted at commencement.

MR. KERR DUNCAN MACMILLAN, assistant professor of church history in the Princeton Theological Seminary, has been elected to the presidency of Wells College.

DR. JAMES H. WOODS has been promoted to be professor of philosophy at Harvard University.

DR. CHARLES AUGUSTUS TUTTLE, professor of political economy and political science at Wabash College, Crawfordsville, Ind., has been elected professor of economics and social science at Wesleyan University.

DR. J. ARGYLL CAMPBELL, junior assistant to Professor Schäfer at Edinburgh University, has been appointed professor of physiology in the University of Singapore.

W. DAWSON, M.A., D.Sc. (Agr.), has been appointed to succeed Mr. A. Henry as reader in forestry at Cambridge University. Mr. Dawson has held a similar position at Aberdeen University.

PROFESSOR STRASBURGER, of Breslau, has accepted the position of director of the newly-established medical policlinic and therapeutic course at Frankfort-on-the-Main, which are to be considered a department of the proposed university.

PROFESSOR KAISERLING, of Berlin, has accepted the appointment as successor of Professor Henke at the Cologne Institute of Pathology.

#### DISCUSSION AND CORRESPONDENCE

##### TYPES OF SPECIES IN BOTANICAL TAXONOMY

It is becoming more and more evident that only by the use of the method of types<sup>1</sup> can any stability be secured in taxonomy. In spite of a growing realization of this fact there has been no adequate appreciation on the part of botanists of the great advantages offered by plants over animals in the facilities they afford for the multiplication of type material.

##### *Primary Types*

Although the author of a new species usually has at his disposal several different specimens upon which he bases his description, nevertheless only a single twig or shoot together with any organs borne on it can be considered to be the true type specimen. It is not permissible to accept as parts of the type other twigs or stems, for it often happens that they were not collected from the plant that yielded the true type specimen and subsequent research may show them to belong

<sup>1</sup> Cook, O. F., 1898, "The Method of Types," in *SCIENCE* (N. S.), 8: 513-516, No. 193, October 14. Cook, O. F., 1900, "The Method of Types in Botanical Nomenclature," in *SCIENCE* (N. S.), 12: 475-481, No. 300, September 28.

to a different variety or even to a different species. Experience has shown that the author of a species is far from infallible, and that to accept his verdict on this point may give rise to a complete misunderstanding of the species on the part of later investigators and cause endless confusion in the subsequent literature.

Even in case of dioecious or polymorphous plants where it is obviously impossible for a single specimen to represent all of the essential characters of the species, the twigs cut from different forms are not to be considered as parts of the type specimen. It is easy to see that where several species occur in the same region it is not always possible for the author of the species to be sure that the different sexes or castes<sup>2</sup> represented in the material at his disposal really belong to one and the same species. It is necessary to designate some one specimen as the type and to associate with it as paratypes additional specimens of the other sex or of the other castes that seem undoubtedly to belong to the same species. Usually the pistillate specimen will be designated as the type.<sup>3</sup>

Even in case of a number of specimens presumably cut from the same plant it is unsafe to consider more than one of them as the type since there is always the chance that two plants growing close together were not distinguished. Abnormalities or bud variations on the type plant might also be overlooked, particularly if the collector, not realizing that he was dealing with a new species, exercised no unusual care.

The type specimen is therefore unique, and can not exist in duplicate. Types are the

<sup>2</sup> Cook has discussed in some detail the various castes of plants having definitely specialized heterism (ropism). Cook, O. F., 1907, "Aspects of Kinetic Evolution," in *Proceed. Wash. Acad. Sci.*, 8: 369-378, February 13.

<sup>3</sup> The term allotype, although proposed for paleontological material, might very properly be applied to any paratype possessing some very important organ or distinctive feature not present in the type itself. Burling, Lancaster D., 1912, "The Nomenclature of Types," in *Journ. Wash. Acad. Sci.*, 2: 519-520, No. 21, December 19.